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Attorney Docket No.: AP101HO

PATENT

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicant(s): Jau-Yuen Chen, et al.

Group Art Unit: 2623

Serial No.: 09/766,123

Examiner: Colin M. LaRose

Filed: January 18, 2001

Title: Memory Efficient Image Artifact Removal Technique for LCP

**CERTIFICATE OF FACSIMILE TRANSMISSION**

I hereby certify that this transmittal and accompanying terminal disclaimer and assignment documents are being facsimile transmitted to facsimile number (703) 872-9306 at the U.S. Patent and Trademark Office on the date shown below.

Date: November 2, 2004

*Ann E. George*  
Ann E. George

**RESPONSE TRANSMITTAL LETTER AND  
PETITION FOR EXTENSION OF TIME UNDER 37 CFR 1.136(a) (IF REQUIRED)**

MAIL STOP AMENDMENT  
COMMISSIONER FOR PATENTS  
P.O. BOX 1450  
ALEXANDRIA, VA 22313-1450

Transmitted herewith is an amendment in the above-identified application. The fee is calculated as shown below:

Claims Remaining After Amendment	Highest # Previously Paid For	# Extra	Rate	Additional Fee
Total Claims: 18	24		\$18.00	\$
Independent Claims: 3	3		\$88.00	\$
<input type="checkbox"/> 1st Presentation of Multiple Dependent Claims			\$300.00	\$
TOTAL ADDITIONAL FEE FOR THIS AMENDMENT				\$

☒ No additional fee is required.

☐ Applicant(s) petition for an extension of time under 37 CFR 1.136 (fees: 37 CFR 1.17(a)-(d) for the total number of months checked below.

Extension (Months)	Fee For Large Entity
<input type="checkbox"/> One (1) Month	\$110.00
<input type="checkbox"/> Two (2) Months	\$430.00
<input type="checkbox"/> Three (3) Months	\$980.00
<input type="checkbox"/> Four (4) Months	\$1530.00
FEE:	\$

☒ If an extension of time is required, please consider this a petition therefor together with authorization to charge Deposit Account No. 19-2746 for any extension fee.

☐ Relative to response to the Final Office Action, an extension for \_\_\_\_\_ months has already been secured and the fee paid therefor of \$\_\_\_\_\_ is deducted from the total fee due for the total months of extension now requested.

☒ Applicant believes that no extension of time is required. However, this conditional petition is being made to provide for the possibility that applicant has inadvertently overlooked the need for a petition for extension of time.

AP101HO

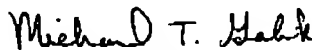
09/766,123

Response Transmittal

- ☐ Enclosed is an Information Disclosure Statement together with Form PTO-1449 and a copy of \_\_\_\_\_ cited reference(s):
- ☐ Enclosed is a certification under 37 CFR 1.97(e).
- ☐ The Commissioner is hereby authorized to charge the fee of \$180.00 under 37 CFR 1.17(p) to Deposit Account No. 19-2746.
- ☐ Enclosed are \_\_\_\_\_.
- ☒ The Commissioner is hereby authorized to charge payment of the following fees during the pendency of this application or credit any overpayment to our Deposit Account No. 19-2746.
- ☒ Any additional filing fees required under 37 CFR 1.16.
- ☒ Any patent application processing fees under 37 CFR 1.16.
- ☒ The Commissioner is hereby authorized to charge payment of the following fees associated with this communication or credit any overpayment to our Deposit Account No. 19-2746.
- ☒ Any additional filing fees required under 37 CFR 1.16.
- ☒ Any patent application processing fees under 37 CFR 1.16.
- ☐ Enclosed is a Submission Under 37 CFR §1.129(a).
- ☒ Enclosed is a Terminal Disclaimer And Certificate Under 37 CFR §3.73(b). The Commissioner is hereby authorized to charge the fee of \$110.00 under 37 CFR 1.20(d) to Deposit Account No. 19-2746. A duplicate copy of this transmittal letter is enclosed.
- ☐ Please charge Deposit Account No. 19-2746 the sum of \$\_\_\_\_. A duplicate copy of this transmittal letter is enclosed.

Date: November 2, 2004

Respectfully submitted,



Michael T. Gabrik  
Registration No. 32,896

Please address all correspondence to:  
Epson Research and Development, Inc.  
Intellectual Property Department  
150 River Oaks Parkway, Suite 225  
San Jose, CA 95134  
Telephone No.: (408) 952-6000  
Facsimile: (408) 954-9058  
Customer No. 20178

NOV 02 2004

AP101HO

PATENT

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s): Jau-Yuen Chen

Group Art Unit: 2623

Serial No.: 09/766,123

Examiner: Colin M. LaRose

Filed: January 18, 2001

Title: Memory Efficient Image Artifact Removal Technique for LCP

## TERMINAL DISCLAIMER AND CERTIFICATE UNDER 37 CFR §3.73(b)

Mail Stop Amendment

Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

Sir:

Your petitioner, Seiko Epson Corporation, a corporation duly organized under the laws of Japan, having a principal office at 3-5, Owa 3-chome, Suwa-shi, Nagano-ken, 392-8502 Japan, and duly represented by the undersigned, represents that it is the assignee of the full title and interest in and to the above-identified application, serial no. 09/766,123, filed January 18, 2001, as evidenced by the deeds of assignment recorded on April 16, 2001 and April 17, 2001 at reels 011719 and 011745 and frames 0618-0619 and 0299-0301, respectively.

Petitioner hereby disclaims the terminal part, if any, of any patent granted on the above-identified application that would extend beyond the expiration date of the full statutory term, as presently shortened by any terminal disclaimer, of any patent issuing from application serial no. 09/766,122, filed on January 18, 2001, and hereby agrees that any patent so granted on said above-identified application shall be enforceable only for and during such period that the legal title to said patent shall be the same as the legal title to any patent issuing from said application serial no. 09/766,122, this agreement to run with any patent granted on the above-identified application and to be binding upon the grantee, its successors or assigns.

Petitioner does not disclaim any terminal part of any patent granted on the above-identified application that would extend beyond the expiration date of the full statutory term, as presently shortened by any terminal disclaimer, of any patent issuing from application serial no. 09/766,122, in the event that any patent issuing from application serial no. 09/766,122 expires for failure to pay a maintenance fee, is held unenforceable, is found invalid, is statutorily disclaimed in whole or terminally disclaimed under 37 CFR 1.321(a), has its claims canceled by a reexamination certificate, or is otherwise terminated prior to the expiration of its statutory term as presently shortened by any terminal disclaimer, except for the separation of legal title stated above.

Customer No. 20178  
Terminal Disclaimer

AP101HO

Petitioner is the assignee of the entire interest in and to the above-identified application, as evidenced by the above-referenced assignments, copies of which are attached to this disclaimer.

For submissions on behalf of Seiko Epson Corporation, the undersigned, whose title is supplied below, is empowered to act on behalf of the Petitioner.

Date: 11/2/04By: Michael T. Gabrik

Michael T. Gabrik  
Attorney for Applicants  
Registration No. 32,896

Epson Research and Development, Inc.  
Intellectual Property Department  
150 River Oaks Parkway, Suite 225  
San Jose, CA 95134  
Customer No. 20178  
Phone: (408) 952-6000  
Facsimile: (408) 954-9058



0005  
UNITED STATES DEPARTMENT OF COMMERCE  
Patent and Trademark Office  
ASSISTANT SECRETARY AND COMMISSIONER  
OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231

JULY 09, 2001

PTAS  
EPSON RESEARCH AND DEVELOPMENT INC.  
MICHAEL T. GABRIK  
INTELLECTUAL PROPERTY DEPARTMENT  
150 RIVER OAKS PARKWAY, SUITE 225  
SAN JOSE, CA 95134



\*101690891A\*

UNITED STATES PATENT AND TRADEMARK OFFICE  
NOTICE OF RECORDATION OF ASSIGNMENT DOCUMENT

THE ENCLOSED DOCUMENT HAS BEEN RECORDED BY THE ASSIGNMENT DIVISION OF THE U.S. PATENT AND TRADEMARK OFFICE. A COMPLETE MICROFILM COPY IS AVAILABLE AT THE ASSIGNMENT SEARCH ROOM ON THE REEL AND FRAME NUMBER REFERENCED BELOW.

PLEASE REVIEW ALL INFORMATION CONTAINED ON THIS NOTICE. THE INFORMATION CONTAINED ON THIS RECORDATION NOTICE REFLECTS THE DATA PRESENT IN THE PATENT AND TRADEMARK ASSIGNMENT SYSTEM. IF YOU SHOULD FIND ANY ERRORS OR HAVE QUESTIONS CONCERNING THIS NOTICE, YOU MAY CONTACT THE EMPLOYEE WHOSE NAME APPEARS ON THIS NOTICE AT 703-308-9723. PLEASE SEND REQUEST FOR CORRECTION TO: U.S. PATENT AND TRADEMARK OFFICE, ASSIGNMENT DIVISION, BOX ASSIGNMENTS, CG-4, 1213 JEFFERSON DAVIS HWY, SUITE 320, WASHINGTON, D.C. 20231.

RECORDATION DATE: 04/16/2001

REEL/FRAME: 011719/0618  
NUMBER OF PAGES: 2

BRIEF: ASSIGNMENT OF ASSIGNOR'S INTEREST (SEE DOCUMENT FOR DETAILS).

ASSIGNOR:

CHEN, JAU-YUEN

DOC DATE: 03/07/2001

ASSIGNOR:

SHU, JOSEPH

DOC DATE: 03/07/2001

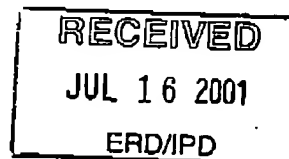
ASSIGNEE:

EPSON RESEARCH AND DEVELOPMENT,  
INC.  
150 RIVER OAKS PARKWAY, SUITE 225  
SAN JOSE, CALIFORNIA 95134

SERIAL NUMBER: 09766123  
PATENT NUMBER:

FILING DATE: 01/18/2001  
ISSUE DATE:

MARCUS KIRK, EXAMINER  
ASSIGNMENT DIVISION  
OFFICE OF PUBLIC RECORDS



Form PTO-1595  
1-31-92RECORDATION FORM COVER SHEET  
PATENTS ONLY

04-27-2001



101690891

To The Commissioner of Patents and Trademarks: Please record the attached original document or copy thereof.

1. Name of conveying party(ies): Jau-Yuen Chen Joseph Shu  4-16-01  Additional name(s) of conveying party(ies) attached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	2. Name and address of receiving party(ies): Name: Epson Research and Development, Inc. Internal Address: Street Address: 150 River Oaks Parkway, Suite 225 San Jose, California 95134  Additional name(s) and addresses attached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
3. Nature of Conveyance:  <input checked="" type="checkbox"/> Assignment <input type="checkbox"/> Merger <input type="checkbox"/> Security Agreement <input type="checkbox"/> Change of Name <input type="checkbox"/> Other  Execution Date: March 7, 2001, March 7, 2001 respectively.	
4. Application number(s) or patent number(s): If this document is being filed together with a new application, the execution date of the application is:  A. Patent Application No(s). 09/766,128  B. Patent No(s).  Additional numbers attached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
5. Name and address of party to whom correspondence concerning document should be mailed:  Intellectual Property Department Epson Research And Development Inc. 150 River Oaks Parkway, Suite 225 San Jose, CA 95134	6. Total number of applications and patents involved: 1  7. Total fee (37 CFR 3.41) .....\$40 <input type="checkbox"/> Enclosed <input checked="" type="checkbox"/> Authorized to be charged to deposit account.  8. Deposit Account Number: 19-2746
DO NOT USE THIS SPACE	
9. Statement and signature. To the best of my knowledge and belief, the foregoing information is true and correct and any copy is a true copy of the original document. Michael T. Gabrik <u>Michael T. Gabrik</u> Date: April 12, 2001 Registration No. 32,896	
Total number of pages including cover sheet, attachments and document: 2	

Docket No. AP101HO

PATENT

ASSIGNMENT

For good and valuable consideration, the receipt of which is hereby acknowledged, I/WE, the undersigned,

Jau-Yuen Chen and Joseph Shu,

who have created a certain invention for which an application for United States Letters Patent has been filed on January 18, 2001, Serial No. 09/766,123 and entitled

**MEMORY EFFICIENT IMAGE ARTIFACT REMOVAL TECHNIQUE FOR LCP**

Do hereby sell, assign and transfer to EPSON RESEARCH AND DEVELOPMENT, INC., a corporation of California, having a place of business at 150 River Oaks Parkway, Suite 225, San Jose, CA 95134, its successors, assigns, and legal representatives, the full and exclusive right to said invention and said application and to any and all inventions described in said application for the United States, its territorial possessions and all foreign countries, and the entire right, title and interest in and to any and all Letters Patent which may be granted therefor in the United States, its territorial possessions and all foreign countries; and in and to any and all continuations-in-part, continuations, divisions, substitutes, reissues, extensions thereof, and all other applications for Letters Patent relating thereto which have been or shall be filed in the United States, its territorial possessions and/or any foreign countries, and all rights, together with all priority rights, under any of the international conventions, unions, agreements, acts, and treaties, including all future conventions, unions, agreements, acts, and treaties;

Agree that EPSON RESEARCH AND DEVELOPMENT, INC., hereinafter referred to as Assignee, may apply for and receive Letters Patent for said invention and said inventions, hereinafter referred to as said invention, in its own name, in the United States, its territorial possessions, and all foreign countries; and that, when requested to carry out in good faith the intent and purpose of this assignment, at the expense of said Assignee, its successors, assigns and legal representatives, the undersigned will execute all continuations-in-part, continuations, divisions, substitutes, reissues, extensions thereof, execute all rightful oaths, assignments, powers of attorney and other papers, testify in any legal or quasi legal proceedings; communicate to said Assignee, its successors, assigns or legal representatives all facts known to the undersigned relating to said invention and the history thereof; and generally do everything possible which said Assignee, its successors, assigns, or legal representatives shall consider desirable for aiding in securing, maintaining and enforcing proper patent protection for said invention and for vesting title to said invention and all applications for patents on said invention in said Assignee, its successors, assigns, or legal representatives; and

Covenant with said Assignee, its successors, assigns, or legal representatives that no assignment, grant, mortgage, license or other agreement affecting the rights and property herein conveyed has been made to others by the undersigned, and that full right to convey the same as herein expressed is possessed by the undersigned.

IN TESTIMONY WHEREOF I/WE have hereunto set MY/OUR signature on the date indicated below.

Date: 3/7/01  
Month/Day/Year

Date: 3/7/01  
Month/Day/Year

Jau-Yuen Chen  
Jau-Yuen Chen  
Joseph Shu  
Joseph Shu

Assignment  
Customer No. 20178

Rev 11/97



008  
UNITED STATES DEPARTMENT OF COMMERCE  
Patent and Trademark Office  
ASSISTANT SECRETARY AND COMMISSIONER  
OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231

JULY 16, 2001

PTAS  
EPSON RESEARCH AND DEVELOPMENT INC.  
MICHAEL T. GABRIK  
INTELLECTUAL PROPERTY DEPARTMENT  
150 RIVER OAKS PARKWAY, SUITE 225  
SAN JOSE, CA 95134



\*101701600A\*

UNITED STATES PATENT AND TRADEMARK OFFICE  
NOTICE OF RECORDATION OF ASSIGNMENT DOCUMENT

THE ENCLOSED DOCUMENT HAS BEEN RECORDED BY THE ASSIGNMENT DIVISION OF THE U.S. PATENT AND TRADEMARK OFFICE. A COMPLETE MICROFILM COPY IS AVAILABLE AT THE ASSIGNMENT SEARCH ROOM ON THE REEL AND FRAME NUMBER REFERENCED BELOW.

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RECORDATION DATE: 04/17/2001

REEL/FRAME: 011745/0299  
NUMBER OF PAGES: 3

BRIEF: ASSIGNMENT OF ASSIGNOR'S INTEREST (SEE DOCUMENT FOR DETAILS).

ASSIGNOR:

EPSON RESEARCH AND DEVELOPMENT,  
INC.

DOC DATE: 03/20/2001

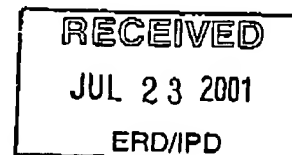
ASSIGNEE:

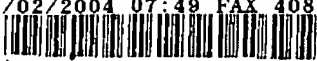
SEIKO EPSON CORPORATION  
4-1 NISHISHINJUKU 2-CHOME  
SHINJUKU-KU  
TOKYO, JAPAN

SERIAL NUMBER: 09766123  
PATENT NUMBER:

FILING DATE: 01/18/2001  
ISSUE DATE:

JEEVON JONES, EXAMINER  
ASSIGNMENT DIVISION  
OFFICE OF PUBLIC RECORDS





101701600

REGISTRATION FORM COVER SHEET  
PATENTS ONLYU.S. Department of Commerce  
Patent and Trademark Office

AP101HO

4-17-01

To The Commissioner of Patents and Trademarks: Please record the attached original document or copy thereof.

<b>1. Name of conveying party(ies):</b> Epson Research And Development, Inc. 150 River Oaks Parkway, Suite 225 San Jose, California 95134  Additional name(s) of conveying party(ies) attached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		<b>2. Name and address of receiving party(ies):</b> Name: <i>Seiko Epson Corporation</i> Internal Address: Street Address: <i>4-1 Nishishinjuku 2-Chome, Shinjuku-ky,</i> <i>Tokyo, Japan</i>  Additional name(s) and addresses attached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
<b>3. Nature of Conveyance:</b>  <input checked="" type="checkbox"/> Assignment <input type="checkbox"/> Merger <input type="checkbox"/> Security Agreement <input type="checkbox"/> Change of Name <input type="checkbox"/> Other  Execution Date: March 20, 2001			
<b>4. Application number(s) or patent number(s):</b> If this document is being filed together with a new application, the execution date of the application is:  A. Patent Application No(s). 09/766,123  B. Patent No(s).  Additional numbers attached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			
<b>5. Name and address of party to whom correspondence concerning document should be mailed:</b>  Intellectual Property Department Epson Research And Development Inc. 150 River Oaks Parkway, Suite 225 San Jose, CA 95134		<b>6. Total number of applications and patents involved:</b> 1  <b>7. Total fee (37 CFR 3.41) .....\$40 E</b> <input type="checkbox"/> Enclosed <input checked="" type="checkbox"/> Authorized to be charged to deposit account.  <b>8. Deposit Account Number: 19-2746</b>	
<b>DO NOT USE THIS SPACE</b>			
<b>9. Statement and signature.</b> <i>To the best of my knowledge and belief, the foregoing information is true and correct and any copy is a true copy of the original document.</i>  <i>Michael T. Gabrik</i> Registration No. 32,896  Date: April 13, 2001  Total number of pages including cover sheet, attachments and document: 3			

03/03/2001 09:00:00 00000003 152745 09766123

61 FC:584 40.00 C1  
Corp Assignment Recordation Cover Sheet  
Customer No. 20178

REV 11/97

AP101HO

ASSIGNMENT  
Corporate

EPSON RESEARCH AND DEVELOPMENT, INC., a California corporation, having a principal place of business at 150 River Oaks Parkway, Suite 225, San Jose, CA 95134 (hereafter the "Assignor"), is the owner by respective Assignment of United States Patent Application identified below (hereafter sometimes called the "Patent Application").

SEIKO EPSON CORPORATION, a corporation of Japan, having a place of business at 4-1 Nishishinjuku 2-chome, Shinjuku-ku Tokyo, Japan (hereafter the "Assignee"), desires to acquire all of the rights to the Patent Application and all inventions described and claimed therein.

THEREFORE, in consideration of the sum of One Dollar (\$1.00) or equivalent and other good and valuable consideration paid to it, Assignor hereby sells and assigns to the Assignee the entire right, title and interest in and to the Patent Application identified below, and all inventions described and claimed therein, in any and all Letters Patent therefor, and in any and all reissues, extensions, renewals, reexaminations, divisions and continuations of such applications or Letters Patent to the full end of the term or terms for which such Letters Patent issue, such entire right, title and interest to be held and enjoyed by the above-named Assignee the same as they would have been held and enjoyed by the Assignor had this Assignment and sale not been made.

<u>ERD Case</u>	<u>U. S.</u>	<u>U. S. Filing Date</u>	<u>Title</u>
<u>No.</u>	<u>Serial No.</u>		
AP101HO	09/766,123	January 18, 2001	Memory Efficient Image Artifact Removal Technique For LCP

By its undersigned representative, the Assignor agrees

a. to execute all papers necessary in connection with the Patent Application and any continuing, divisional, reissue, reexamination or corresponding application thereof and also to execute separate Assignment in connection with such application as the Assignee may deem necessary or expedient;

b. to execute all papers necessary in connection with any interference which may be declared concerning the Patent Application or any continuation, division, reissue or reexamination thereof and to cooperate with the Assignee in every way possible in obtaining evidence and going forward with such interference; and

c. to perform all affirmative acts which may be necessary to obtain a grant of a valid United States patent to the Assignee on any of the Patent Application and on any continuation, division, reissue or reexamination of any of the Patent Application.

The Assignor hereby covenants that it has the full right to convey the entire interest herein assigned, and that it has not executed, and will not execute, any agreement in conflict therewith.

EPSON RESEARCH AND DEVELOPMENT, INC., a California corporation, certifies that it is the Assignee of the entire right, title and interest in the Patent Application identified above by virtue of Assignment from the inventors of the Patent Application identified above. Assignment to be recorded in the Patent and Trademark Office as identified below.

<u>ERD</u> <u>Case No.</u>	<u>U. S. Serial</u> <u>No.</u>	<u>Assignment</u> <u>Execution Date</u>
AP101HO	09/766,123	March 7, 2001


The undersigned has reviewed the documents in the Patent Application identified above and, to the best of undersigned's knowledge and belief, title is in the Assignor identified above.

The undersigned is empowered to sign this certificate on behalf of the Assignor.

I hereby declare that all statements made herein of my own knowledge are true, and that all statements made on information and belief are believed to be true; and further, that these statements are made with the knowledge that willful false statements, and the like so made, are punishable by fine or imprisonment, or both, under Section 1001, Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

IN WITNESS WHEREOF, executed by the Assignor's undersigned representative on the date following the undersigned's name.

EPSON RESEARCH AND DEVELOPMENT, INC.

By:   
Eishi Momosaki  
President  
Title 3-20-2001  
Date